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# Growing & Evolving: Space Operations



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**By COL Roger F. Mathews**

**U.S.** Army Space and Missile Defense Command/U.S. Army Forces Strategic Command (SMDC/ARSTRAT) has made tremendous leaps forward in the Space operations field. Space professionals have made great strides in growing from five Army Space Support Teams in the late 1990s that habitually supported a designated corps, into the 1st Space Brigade with two Space battalions that support brigade-sized to Army units and joint and combined forces, and a signal battalion that controls the payload of 12 satellites. This growth continues beyond the brigade. Space forces throughout the Army continue to grow and now include Space Support Elements organic to Army divisions and corps. From many of you, the most frequent question I hear is, "What's next?"

To date, Army Space units repeatedly have proven their worth. The 1st Space Brigade and the 1st Space Battalion are now Modified Table of Organization and Equipment units and, through Fiscal Year 2011 will be filling up with Active, Guard and Reserve Soldiers who will be trained how to plan, integrate and weld Space-based capabilities to the supported commander's battleplan for stronger, more effective military operations. The Colorado Army National Guard Space Support Battalion (formerly the 193rd Space Battalion) is also expanding with approval to add more Space companies.

The 1st Space Brigade has developed a deployable element called an Army Space Coordination Detachment. Upon arrival in theater it is normally OPCON/TACON to the Joint Forces Land Component Commander (JFLCC) or the Army Service Component Commander. The detachment is tailorable and coordinates, integrates and synchronizes the efforts of deployed Space forces into the theater Space concept of operations. The concept of operations is developed by the Joint Force

Commander in conjunction with the component that has been designated as the Space Coordinating Authority. The Space Coordination Detachment provides command and control for the execution of in-theater Space missions assigned by the Joint Force Commander/Joint Forces Land Component Command and supported by U.S. Strategic Command. The detachment also integrates Army capabilities in support of joint Space control operations. It coordinates with the Space Support Elements (discussed later in this article) to integrate Army Space support requirements for theater Army Space forces and serves as the principal Army advocate to the Space Coordinating Authority (SCA).

In addition to the brigade's organic Space forces, the Army is manning, equipping and fielding Space Support Elements to each division, corps and Army headquarters to provide Space operations support to tactical-level units. The elements and the Brigade's Space Coordination Detachment/Army Space Support Teams provide complementary capabilities. The Space Support Element concentrates on staff planning within its headquarters, while retaining enough production capability to support those planning efforts. The Army Space Support Teams bring additional production capability while retaining the ability to support critical planning functions.

These teams can augment Space Support Elements with production capacity and additional expertise. Additionally, Army Space Support Teams support units that do not have Space Support Elements, e.g., Combined Joint Special Operations Task Forces and, until they get their Space Support Elements, corps. (I Corps currently has a single FA40 and will see the first Corps Space Support Element in Fiscal Year 2007, followed by III Corps in Fiscal Year 2009 and XVIII Airborne Corps in Fiscal Year 2010. Third (3rd) Army will receive its

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Space Support Element this summer. As elements are assigned to these organizations, Army Space Support Teams can be utilized elsewhere.)

## Space Support Doctrine

Last Fall, in the Air Defense Artillery magazine article, *“Enhancing Joint Command and Control of Army Space Forces,”* BG Jeffrey C. Horne, COL Kurt S. Story and then-MAJ Troy McKeown<sup>1</sup> spelled out the new concept of operations for theater Space forces that seamlessly links Space operators from the strategic level to the tactical level. Since then the brigade has had an opportunity to train and test out the new concept and to refine it.

Let me briefly review the current concept of operations for controlling theater Space forces. During combat operations, the Space Coordinating Authority coordinates Space operations, integrates Space capabilities and has primary responsibility for in-theater joint Space operations planning as defined in Joint Publication 3-14, Joint Doctrine for Space Operations.

The Space Coordinating Authority's link to many Space assets is through the newly formed Joint Functional Component Command for Space and Global Strike<sup>2</sup> (JFCC-SGS), as executed by the commander, Joint Space Operations in the Joint Space Operations Center at Vandenberg Air Force Base, Calif.

The relationship between Army Space operations and the Joint Space Operations Center is still in its infancy. This summer (2006) a four-man contingent of Army Space professionals, led by COL Kurt Story, was assigned to the center, expanding Army presence there. They will, no doubt, be able to integrate more Army-specific mission requirements and enhance Space support to the theater land component commander and improve Army Space situational awareness.

## Evolving Theater: Space Support Structure From The 1st Space Brigade

As with all new concepts, as requirements and capabilities

change, and as experience dictates, SMDC/ARSTRAT will refine the theater Space support structure so that it can best accomplish the mission: to support the Land Component Commander in support of the Joint Force Commander's campaign plan.

Using lessons learned in Ulchi Focus Lens 2005, Sharp Focus, and Terminal Fury Exercises, as well as deployments to Iraq and Afghanistan in support of Operations Iraqi Freedom and Enduring Freedom, the 1st Space Brigade has replaced non-doctrinal terms with those familiar to the warfighting community, and has modified its support to the joint force and ground force commanders.

The brigade and battalion will tailor their support element(s) based on the make-up of forces in theater. One scenario would place a Space Coordination Detachment from the brigade (which is still a developmental concept, not doctrine) with the Land Component Commander and deploy another detachment to the component that retains Space Coordinating Authority, historically the Air Component Commander. This will allow strategic and operational planners to integrate Space requirements into the initial planning phases and into the higher headquarters' battle rhythm.

The division and corps Space Support Elements will coordinate their actions, priorities and requests for effects through the Army-level Space Support Element (normally at the Land Component Command), who will then coordinate the Land Component Commander's consolidated and deconflicted priorities with the brigade Space Coordination Detachment located at the Air Component Command, i.e., the Space Coordinating Authority's headquarters.

## The CONOPS in Action

The 1st Space Brigade participated in RSO&I 06 (Reception, Staging, Onward Movement and Integration) on the Korean Peninsula in early 2006. Even though the concept of operations outlined how Space Coordination Detachments/Army Space Support Teams coordinate with Space Support Elements, that concept could not be tested because Space Support Elements had not  
(See Mathews, page 51)

been fielded to units participating in this exercise. The brigade, however, had incorporated their lessons learned from previous exercises, e.g., developing smaller, tailored Space Coordination Detachments and imbedding them with appropriate organizations and using processes and terms familiar to the supported warfighter and tested them.

One Brigade Space Coordination Detachment was integrated with the Land Component Command's Fires and Effects Coordination Cell to determine and plan the commander's Space requirements. Another Space Coordination Detachment was placed with the Air Component Command's Battlefield Coordination Detachment to plan and execute the commander's Space requirements through the Space Coordinating Authority, typically designated as the Air Component Command Commander. This enabled the brigade to capture the Land Component Commander's Space requirements and to synchronize and support the Land Component Command Commander's objectives.

Using the application tool Info Workspace (IWS)<sup>3</sup>, the two Space Coordination Detachments were able to collaborate daily through effects synchronization briefings and planning sessions. The IWS software enabled the detachments to seamlessly pass information requirements, synchronize desired effects, and integrate them into the battle rhythms of the Air Component Command and Land Component Command.

Working with processes already familiar to the warfighter and established in-theater, the brigade Space Coordination Detachments used the theater kinetic and non-kinetic targeting process to nominate Space related targets. This represented the first successful integration and synchronization of Space targets within the Korean Theater of Operations.

One of the lessons learned in RSO&I was that Space professionals need to be ready to educate warfighters on how to integrate Space-based capabilities into their plans and operations. In this case, the brigade Space Coordination Detachment realized that the Air Component Command was not using Joint Blue Force Situational Awareness (JBFSa) and did not understand how it could enable them to have a better understanding or picture of what the operational forces were doing. Partnering with the 8th Army FA40s, Majors Rich Lewis and Jim Crossley, who were the resident experts, and the Mission Management Center at SMDC/ARSTRAT in Colorado Springs, Colo., the Space Coordination Detachment began an education process to ensure a common understanding of JBFSa. The Air Component Command's detachment pulled up "live" JBFSa data and displayed it on the SIPR and GCCS-K Common Operating Picture. At the beginning of RSO&I 06, very few individuals at the Air Component Command understood its power, its architecture, or how to troubleshoot problems. This exercise helped the Air Component Command team identify the JBFSa's full capabilities as well as its constraints. As a result of this "lesson," the brigade has added JBFSa architecture as a focus area for UFL 06 and will reachback directly to the Mission Management Center.

## Where to from Here?

You may be wondering why I want to write about and discuss these brigade-level operations. I bring them up as an example of how we must all examine what it is we do in the Space operations world regardless of the operational level at which we work. The ability to identify and implement changes and improvements to how we support the warfighter is essential to the maturation of the mission area. It also brings me to another point I want to make: it is our responsibility to our Soldiers to provide them with realistic training based on sound doctrine.

As the Space Brigade has evolved and grown, its leaders have aggressively trained Soldiers in both their Space operations skills and their Soldier skills. Where no doctrine existed, they created it to establish standards, e.g., their unique qualification tables. Their example of initiative and personal involvement sets the standard for a successful future in which the Army can fully integrate Space-based capabilities towards a common objective — victory.

Over the next year, the brigade and its subordinate battalions expect to be filled to their full authorization. As they complete this transformation, they will remain fully engaged with their stated priorities: the preparation, deployment and sustainment of Space forces for combat. The brigade will continue to integrate training, plans and operations with other services' Space forces, the Joint Space Operations Center, and supported theaters in order to refine and validate the Concept for Army Theater Space Support to Joint Operations. Stay tuned for updates.

Let's not let this progress lull us into complacency. We all know that the Army — any service for that matter — exists to serve the Nation and, when called upon, to fight and win its wars. It follows that all Army units must be ready and relevant in today's environment and continuing war on terrorism. It stands to reason that if we're not, the Army will take that force structure and use it where support is needed. Space professionals throughout the Army must continue to assess how Space operations are supporting the war effort, judge how Space Operations doctrine and concepts of operations work during exercises, and provide honest feedback through the chain of command. With that, we — the commanders, the doctrine developers and the Space operations professionals — can discuss and implement the changes that need to be made to improve our doctrine and support to the warfighters.

## REFERENCES

1. At the publication of the referenced article, BG Horne was deputy commanding general for operations, U.S. Army Space and Missile Defense Command/U.S. Army Forces Strategic Command; COL Story was 1st Space Brigade commander; and now LTC McKeown was brigade executive officer.
2. At the writing of this article USSTRATCOM has considering splitting JFCC-Space and Global Strike into JFCC-Space and JFCC-Global Strike. The JFCC-SGS is US Strategic Command's (USSTRATCOM) mechanism for planning, executing and synchronizing Space capabilities.
3. Info Workspace or IWS is a software package on the Space Operations System used by both SSEs and ARSSTs, as well as the brigade. IWS is a distributed, synchronous, collaboration tool that provides chat, file sharing, and simultaneous collaborative presentations and discussions.